IST659 Lab2 Exercise

In this lab exercise, you are required to use Visio to create two relational data models for two database problems, and use MS Access to build corresponding tables, establish their relationships, and add sample data.

1. Problem Description

(1) You need to use the relational data model to illustrate the relationships among members of Twitter, a social media service. To simplify the problem, just consider that any member can have a profile, and have one or more members in his/her network.

(2) You need to design a simplified Library Database System. Assume the Library employee can loan out books to Customers, and Customer can loan out one or more books.

2. Instruction

Create two ERDs according to the following instruction

(1) Create necessary entities, and give appropriate names to them.
(2) Add entity attributes. Make sure their attributes are at atomic level using good naming conventions (no composite attribute, no multi-value attribute).
(3) Set up primary key for each entity.
(4) Establish relationships between entities. Give the relationships appropriate names (show forward verb phrases only) and recognize the associations (foreign keys).
(5) Mark correct cardinality of the relationships.
(6) Use MS Access to build the tables, establish relationships, and add sample data. Please attach the datasheet view of each table and the relationship model with your report.

3. Submission instruction

Please submit your report (including the ERD and screenshots to the questions) in one Word file to BlackBoard. You can copy and paste your Visio ERD directly to MS Word file. Name your file in this format "IST659-Lab2-Lastname-Firstname.doc". Please also bring a paper copy to class. It's easier to mark and comment on data models on paper. Make sure to print your names on the paper copy as well.

Why is it a bad idea to attach multiple files, like one .doc(x) file and one .vsd file? Well, it's part of the Internet etiquette. The more files you attached, the longer it takes to download, organize, and grade them. And your instructor or TA might grade your report using an electronic device that does not have Visio or Access installed. Thank you for following the instructions.

5. Due Date

  The lab report is due on Tuesday, 02/9, 02:00pm. The instructor and TA usually set aside a chunk of time to grade the reports. Late submissions would prolong the

grading process. To ensure fast feedback, please turn in your report on time. If you cannot finish your homework on time for some reason, please turn in the unfinished work and explain your situation.

6. Grading Rubrics

This lab evaluates students' understanding of some key concepts: entity, attribute, primary key, cardinality of relationship, and foreign key constraint. The grading is based on the assessment whether the students have grasped these key concepts and have been able to use Visio and MS Access.

5 points – all concepts correctly understood, all answers correct
4.5 points – confusion about a key concept, sometimes right
4 points – one key concept obviously misunderstood
3.5 points – confusion about a couple concepts, sometimes right
3 points – two key concepts obviously misunderstood
2 points or below – basically don't understand these concepts